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**COMMISSION DELEGATED REGULATION (EU) 2025/417**

**of 28 November 2024**

**supplementing Regulation (EU) 2023/1114 of the European Parliament and of the Council with regard to regulatory technical standards specifying the manner in which crypto-asset service providers operating a trading platform for crypto-assets are to present transparency data**

**(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 <sup>(1)</sup>, and in particular Article 76(16), third subparagraph, thereof,

Whereas:

- (1) A high degree of transparency is essential to ensure that investors are adequately informed of the true level of actual and potential transactions in crypto-assets traded on a trading platform operated by a crypto-asset service provider. This high degree of transparency should also ensure a level playing field between trading platforms so that the price discovery process in respect of an individual crypto-assets is not impaired by the fragmentation of liquidity, and investors are not thereby disadvantaged.
- (2) In order for investors to be adequately informed about access, costs, scope, functioning of trading platforms they use or intend to use, it is important for trading platforms to make available their operating rules in a transparent and non-discriminatory manner. Investors should have easy access to this information.
- (3) To enable investors to take informed decisions on orders or transactions on crypto-assets and to help maintain market integrity, trading platforms for crypto-assets should publicly disclose all orders and transactions as close to real-time as is technically possible on their platforms. In relation to that, it is also important to harmonise the information to be published so as to enable investors to use, compare and aggregate the information published from different trading platforms for crypto-assets.
- (4) To ensure fair conditions for all types of investors, both qualified investors and retail holders, regarding the access to order management facilities, trading platforms for crypto assets may offer reserve and stop orders directly through their trading platform when certain conditions are met.
- (5) Distributed ledger technology has given rise to innovative structures in crypto-asset trading platforms. Crypto-asset trading platforms are often differentiated as either off-chain Centralised Exchanges (CEXs) or on-chain Decentralised Exchanges (DEXs), such as those operated under an automated market maker model. CEXs are characterised by centralised control over trading operations and custodial practices. CEXs typically use mechanisms which are common in traditional finance, including central limit order books. DEXs, by contrast, operate without a central operator and facilitate trading directly on distributed ledgers through smart contracts, while allowing users to trade using their non-custodial wallets. In addition, the evolving landscape that includes hybrid models that combine features of both CEXs and DEXs necessitates a regulatory approach that is both precise and adaptable. In view of these developments, it is appropriate to clarify the transparency data requirements applicable to those trading systems that facilitate trading directly on distributed ledgers through smart contracts, in as much as they are not operated in a fully decentralised manner without intermediary and hence subject to Regulation (EU) 2023/1114.

<sup>(1)</sup> OJ L 150, 9.6.2023, p. 40, ELI: <http://data.europa.eu/eli/reg/2023/1114/oj>.

- (6) Information which is required to be made available as close to real time as possible should be made available as instantaneously as technically feasible, assuming a reasonable level of efficiency of the systems of the crypto-asset service providers operating a trading platform for crypto-assets. The publication of the information close to the maximum time limit should occur only in exceptional cases where the systems available do not allow for a publication in a shorter period of time.
- (7) Specifying the level of disaggregation by which trading platforms can sell data is important to meet the diverse needs of market participants that contribute to efficient markets. To ensure that users of data can purchase or access only data that meets their specific needs, crypto-asset service providers operating a trading platform for crypto-assets should disaggregate data by, as a minimum, the type of crypto-asset (asset-referenced tokens, e-money tokens, crypto-assets other than asset-referenced tokens and e-money tokens), the currency in which the crypto-assets are traded, and the type of trading system. Those data should be provided to users on a crypto-asset basis where possible.
- (8) To ensure that pre-trade and post-trade data offered for purchase appropriately match the demand from market participants, crypto-asset service providers operating a trading platform should offer any combination of disaggregation criteria on a reasonable commercial basis.
- (9) This Regulation is based on the draft regulatory technical standards submitted to the Commission by the European Securities and Markets Authority.
- (10) The European Securities and Markets Authority has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the advice of the Securities and Markets Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1095/2010 of the European Parliament and of the Council<sup>(2)</sup>,

HAS ADOPTED THIS REGULATION:

#### *Article 1*

### **General principles of presentation of the information on operating rules for trading platforms**

1. Crypto-asset service providers operating a trading platform for crypto-assets shall publish the information on the operating rules for their trading platform free of charge and in a manner that is easily accessible, non-discriminatory, prominent, comprehensible, fair, clear, not misleading and facilitates understanding.
2. Crypto-asset service providers operating a trading platform for crypto-assets shall publish the operating rules for their trading platform in a single document on the crypto-asset service provider's website.

#### *Article 2*

### **Pre-trade transparency**

1. Crypto-asset service providers operating a trading platform for crypto-assets shall make public any bid and ask prices and the depth of trading interest at those prices, as referred to in Article 76(9) of Regulation (EU) 2023/1114, in accordance with the type of trading systems they operate as listed in Table 1 of Annex I to this Regulation.

<sup>(2)</sup> Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC (OJ L 331, 15.12.2010, p. 84, ELI: <http://data.europa.eu/eli/reg/2010/1095/oj>).

2. When the objective market conditions referred to in point (a) occur, crypto-asset service providers operating a trading platform for crypto-assets shall make public the orders that meet all of the following conditions:
  - (a) the orders are contingent on the occurrence of objective market conditions which are pre-defined by the trading system's protocol;
  - (b) the orders cannot interact with other trading interests prior to the disclosure to the order book operated by the trading platform;
  - (c) once disclosed to the order book, the orders interact with other orders in accordance with the rules applicable to orders of that kind at the time of disclosure.
3. Crypto-asset service providers operating a trading platform for crypto-assets shall make public the details of each order for crypto-assets as set out in Tables 2 and 3 of Annex I.

### *Article 3*

#### **Post-trade transparency**

1. Crypto-asset service providers operating a trading platform for crypto-assets shall make public the details of each transaction as referred to in Article 76(10) of Regulation (EU) 2023/1114 as set out in Tables 1 and 2 of Annex II.
2. Where a previously published trade report is cancelled, crypto-asset service providers operating a trading platform for crypto-assets shall make public a new trade report which contains all the details of the original trade report and the cancellation flag specified in Table 3 of Annex II.
3. Where a previously published trade report is amended, crypto-asset service providers operating a trading platform for crypto-assets shall make the following information public:
  - (a) a new trade report that contains all the details of the original trade report and the cancellation flag specified in Table 3 of Annex II;
  - (b) a new trade report that contains all the details of the original trade report with all necessary details corrected, and the amendment flag specified in Table 3 of Annex II.

### *Article 4*

#### **Real time publication of transactions**

For transactions executed on their crypto-asset trading platforms, crypto-asset service providers operating a trading platform for crypto-assets shall make public the details of each transaction as set out in Tables 1, 2 and 3 of Annex II as close to real-time as is technically possible and in any case within thirty seconds after the execution of the transaction.

### *Article 5*

#### **Disaggregation of pre-trade and post-trade data**

1. Crypto-asset service providers operating a trading platform for crypto-assets shall make the information published in accordance with Articles 2 and 3 available to the public by publishing pre-trade and post-trade transparency data separately.
2. Crypto-asset service providers operating a trading platform for crypto-assets shall upon request by any interested party make the data published in accordance with Articles 2 and 3 available to the public by presenting pre-trade and post-trade data disaggregated for each crypto-asset.
3. In addition to presenting the data in accordance with paragraph 2, crypto-asset service providers operating a trading platform may present the data referred to in paragraph 2 in bundles of crypto-assets.
4. Paragraphs 2 and 3 shall not apply where the information referred to in Articles 2 and 3 is made available free of charge.

*Article 6***Entry into force**

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 28 November 2024.

*For the Commission*  
*The President*  
Ursula VON DER LEYEN

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ANNEX I

PRE-TRADE INFORMATION TO BE MADE PUBLIC

Table 1

Description of the type of trading systems and the related information to be made public in accordance with Article 1(1)

	Type of trading system	Description of the trading system	Information to be made public
1	Continuous auction order book trading system	A system that by means of an order book and a trading algorithm operates without human intervention and matches sell orders with buy orders on the basis of the best available price on a continuous basis.	The aggregated number of orders and the crypto-assets that those orders represent at each price level for at least the five best bid and offer price levels.
2	Quote-driven trading system	A system where transactions are concluded on the basis of firm quotes that are continuously made available to participants.	For each crypto-assets traded on the trading system, the best bid and offer by price of each participant, together with the volumes corresponding to those prices.  The quotes made public shall be those that represent binding commitments to buy and sell the crypto-assets and that indicate the price and volume of crypto-assets in which the participants are prepared to buy or sell.
3	Periodic auction trading system	A system that matches orders on the basis of a periodic auction and a trading algorithm operated without human intervention.	The price at which the auction trading system would best satisfy its trading algorithm in respect of crypto-assets traded on the trading system and the volume that would potentially be executable at that price by participants in that system.
4	Automated market makers	A system relying on liquidity pools and mathematical pricing and valuation models for the automatic execution of individual transactions.	(i) the mathematical equation used to determine the price and the quantity of the crypto-assets in the liquidity pools; (ii) the level of liquidity in the liquidity pool at a given moment in time (on a continuous basis); and (iii) any further information and parameters that allow to determine the price at which a specific order would be executed.

	Type of trading system	Description of the trading system	Information to be made public
5	Hybrid trading system	A system falling into two or more of the types of trading systems referred to in rows 1 to 4 of this table.	<p>For hybrid trading systems that combine different trading systems at the same time, the requirements correspond to the pre-trade transparency requirements applicable to each type of trading system that forms the hybrid system.</p> <p>For hybrid trading systems that combine two or more trading systems subsequently, the requirements correspond to the pre-trade transparency requirements applicable to the respective trading system operated at a particular point in time.</p>
6	Any other trading system	Any other type of trading system.	Adequate information as to the level of orders or quotes and of trading interests in respect of crypto-assets traded on the trading system; in particular, the five best bid and offer price levels and/or two-way quotes of each market maker in the crypto-assets, where the characteristics of the price discovery mechanism so permit.

Table 2

Symbol table for Table 3

Symbol	Data type	Definition
{ALPHANUM-n}	Up to n alphanumerical characters	Free text field.
{CURRENCYCODE_3}	3 alphanumerical characters	3-letter currency code, as specified by ISO 4217 currency codes.
{DATE_TIME_FORMAT}	ISO 8601 date and time format	<p>Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddZ.</p> <ul style="list-style-type: none"> <li>— ‘YYYY’ is the year;</li> <li>— ‘MM’ is the month;</li> <li>— ‘DD’ is the day;</li> <li>— ‘T’ – means that the letter ‘T’ shall be used</li> <li>— ‘hh’ is the hour;</li> <li>— ‘mm’ is the minute;</li> <li>— ‘ss.dddZ’ is the second and its fraction of a second;</li> <li>— Z is UTC time.</li> </ul> <p>Dates and times shall be reported in UTC.</p>

Symbol	Data type	Definition
{DECIMAL-n/m}	Decimal number of up to n digits in total of which up to m digits can be fraction digits	Numerical field for both positive and negative values. — decimal separator is ‘.’ (full stop); — negative numbers are prefixed with ‘-’ (minus); values are rounded and not truncated.
{MIC}	4 alphanumeric characters	Market identifier as specified in ISO 10383.

Table 3

**List of details for pre-trade transparency**

#	Field identifier	Description and details to be published	Format to be populated as specified in Table 2
1	Submission date and time	Where the orders and quotes do not have to be published on an aggregated basis, the date and time when the order or quote was introduced for execution into the trading system.	{DATE_TIME_FORMAT}
2	Crypto-asset identification code	Unique and unambiguous identifier of the crypto-asset in accordance with Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.	To be populated in accordance with Field 10 of table 2 of Section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.
3	Crypto-asset full name	Full name of the crypto-asset.	{ALPHANUM-350}
4	Buy-sell indicator	Indicator of whether the order is to buy or sell.	‘BUYT’ – buy ‘SELL’ – sell
5	Price	The price of orders and quotes as required for each trading system in Table 1 of Annex I and excluding, where applicable, commission and accrued interest.  Where the price is expressed in monetary terms, it shall be provided in the major currency unit.  Where the crypto-asset is traded based on a currency pair, the price shall express the quantity of the quote currency for one unit of the base currency.  This field shall be left blank in case of market orders.	{DECIMAL-18/13} where the price is expressed in monetary value.  {DECIMAL-11/10} where the price is expressed in percentage or yield.  {DECIMAL-18/17} where the price is expressed in basis points.

#	Field identifier	Description and details to be published	Format to be populated as specified in Table 2
6	Price currency	<p>Currency in which the trading price for the crypto-asset related to the order is expressed (applicable where the price is expressed as monetary value).</p> <p>Where the crypto-asset is traded in electronic money/e-money token, the identifier referred to in Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114 shall be used.</p> <p>Where the price of the crypto-asset is expressed in monetary terms and in a currency pair, the currency pair in which the price for the crypto-asset related to the order is expressed shall be reported. The first currency code shall be that of the base currency and the second currency code shall be that of the quote currency. The quote currency determines the price of one unit of the base currency. The ISO currency code and the DTI short name as registered in accordance with the ISO 24165-2 data elements for registration of the DTI or alternative identifier referred to in Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114 shall be used to represent the fiat currency and the crypto asset respectively in the currency pair.</p>	To be populated in accordance with Field 21 of Table 2 of Section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.
7	Price notation	Indicates whether the price is expressed in monetary value, in percentage, in yield, or in basis points.	<p>'MONE' – Monetary value</p> <p>'PERC' – Percentage</p> <p>'YIEL' – Yield</p> <p>'BAPO' – Basis points</p>
8	Quantity	<p>For crypto-assets traded in units, the number of units of the crypto-asset.</p> <p>For crypto-assets not traded in units, the nominal or monetary value of the crypto-asset expressed in the same currency of the price in Field 5 'Price', as per Field 6 'Price currency'.</p> <p>Where the price is expressed in sub-components of that crypto-asset, it shall be nonetheless recorded in decimal notation of the price expressed in units of that crypto-asset.</p> <p>Where Table 1 requires the aggregated publication of orders, the total number of units or the total nominal or monetary value of aggregated orders.</p>	<p>{DECIMAL-18/17} where the quantity is expressed as number of units.</p> <p>{DECIMAL-18/5} where the quantity is expressed as a monetary or nominal value.</p>



#	Field identifier	Description and details to be published	Format to be populated as specified in Table 2
9	Quantity currency	Currency in which the quantity is expressed. The currency shall refer to the crypto-asset units, even where the transaction is denominated in sub-components of that crypto-asset.  Field only needs to be populated where the quantity is expressed as a nominal or monetary value or as crypto-asset units.	Identifier referred to in Field 26 of Table 2 of Section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.
10	Quantity notation	Indicates whether the quantity reported is expressed in number of units, as a nominal value, as a monetary value, or as crypto-asset units.	<ul style="list-style-type: none"> <li>— ‘UNIT’ – Number of units</li> <li>— ‘NOML’ – Nominal value</li> <li>— ‘MONE’ – Monetary value</li> <li>‘{CRYPT}’ – Value in crypto-assets</li> </ul>
11	Venue	Identification of the crypto-asset trading platform where the order was submitted.  Where the crypto-asset trading platform uses segment MICs, the segment MIC shall be used.  Where the crypto-asset trading platform does not use segment MICs, the operating MIC shall be used.	{MIC}
12	Number of orders and quotes	The number of aggregated orders or quotes from different clients (where aggregated information is required under Table 1 of Annex I).	{DECIMAL-18/0}
13	Trading system	Type of trading system where the order or quote is advertised	‘CLOB’ for continuous auction order book trading systems, ‘QDTS’ for quote driven trading systems, ‘PATS’ for periodic auction trading systems, ‘HYBR’ for hybrid trading systems, ‘AMMS’ for automated market makers, ‘XXXX’ for any other trading system
14	Publication date and time	Date and time when the information was published.	{DATE_TIME_FORMAT}

## ANNEX II

## POST-TRADE INFORMATION TO BE MADE PUBLIC

Table 1

Symbol table

Symbol	Data type	Definition
{ALPHANUM-n}	Up to n alphanumerical characters	Free text field.
{CURRENCYCODE_3}	3 alphanumerical characters	3-letter currency code, as specified by ISO 4217 currency codes.
{DATE_TIME_FORMAT}	ISO 8601 date and time format	<p>Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddddZ.</p> <ul style="list-style-type: none"> <li>— 'YYYY' is the year;</li> <li>— 'MM' is the month;</li> <li>— 'DD' is the day;</li> <li>— 'T' – means that the letter 'T' shall be used</li> <li>— 'hh' is the hour;</li> <li>— 'mm' is the minute;</li> <li>— 'ss.ddddd' is the second and its fraction of a second;</li> <li>— Z is UTC time.</li> </ul> <p>Dates and times shall be reported in UTC.</p>
{DECIMAL-n/m}	Decimal number of up to n digits in total of which up to m digits can be fraction digits	<p>Numerical field for both positive and negative values.</p> <ul style="list-style-type: none"> <li>— decimal separator is '.' (full stop);</li> <li>— negative numbers are prefixed with '-' (minus);</li> </ul> <p>Where applicable, values shall be rounded and not truncated.</p>
{MIC}	4 alphanumerical characters	Market identifier as specified in ISO 10383.

Table 2

List of details for post-trade transparency

#	Field identifier	Content to be reported	Formats and standards to be used for reporting
1	Trading date and time	Date and time when the transaction was executed.	{DATE_TIME_FORMAT}

#	Field identifier	Content to be reported	Formats and standards to be used for reporting
2	Crypto-asset identification code	Unique and unambiguous identifier of the crypto-asset in accordance with Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.	To be populated in accordance with Field 10 of table 2 of section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.
3	Crypto-asset full name	Full name of the crypto-asset.	{ALPHANUM-350}
4	Price	Traded price of the transaction excluding, where applicable, commission, other fees and accrued interest.  Where the price is recorded in monetary terms, it shall be provided in the major currency unit.  Where the crypto-asset is traded based on a currency pair, the price shall express the quantity of the quote currency for one unit of the base currency.	{DECIMAL-18/13} where the price is expressed as a monetary value.
5	Missing Price	Where the price is not available but pending, the value shall be 'PNDG'.  Where the price is not applicable, the value shall be 'NOAP'.	'PNDG' in case the price is not available.  'NOAP' in case the price is not applicable.
6	Price notation	Indicates whether the price is expressed in monetary value, in percentage, in yield, or in basis points.	'MONE' – Monetary value 'PERC' – Percentage 'YIEL' – Yield 'BAPO' – Basis points
7	Price currency	Currency in which the trading price for the crypto-asset related to the order is expressed (applicable where the price is expressed as monetary value).  Where the crypto-asset is traded in electronic money/e-money token, the identifier referred to in Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114 shall be used.	To be populated in accordance with Field 21 of Table 2 of Section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.

#	Field identifier	Content to be reported	Formats and standards to be used for reporting
		Where the price of the crypto-asset is expressed in monetary terms and in a currency pair, the currency pair in which the price for the crypto-asset related to the order is expressed shall be reported. The first currency code shall be that of the base currency and the second currency code shall be that of the quote currency. The quote currency determines the price of one unit of the base currency. The ISO currency code and the DTI short name as registered in accordance with ISO 24165-2 data elements for registration of the DTI or alternative identifier referred to in Article 15 of the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114 shall be used to represent the fiat currency and the crypto asset respectively in the currency pair.	
8	Quantity	Field to be populated with the executed quantity.	{DECIMAL-18/17} where the quantity is expressed as number of units. {DECIMAL-18/5} where the quantity is expressed as monetary or nominal value. {DECIMAL-18/13} where the price is expressed in sub-components of that crypto-asset.
9	Quantity currency	Currency in which the quantity is expressed. The currency shall refer to the crypto-asset units, even where the transaction is denominated in sub-components of that crypto-asset.  Field only needs to be populated where the quantity is expressed as a nominal monetary value or crypto-asset units.	Identifier referred to in Field 26 of Table 2 of Section 2 of the Annex to the delegated regulation establishing technical standards adopted pursuant to Article 68(10)(b) of Regulation (EU) 2023/1114.
10	Quantity notation	Indicates whether the quantity reported is expressed in number of units, as a nominal value, as a monetary value, or as crypto-asset units.	— 'UNIT' – Number of units — 'NOML' – Nominal value — 'MONE' – Monetary value '{CRYP}' – Value in crypto-assets

#	Field identifier	Content to be reported	Formats and standards to be used for reporting
11	Venue of execution	Identification of the crypto-asset trading platform where the order was submitted.  Where the crypto-asset trading platform uses segment MICs, the segment MIC shall be used.  Where the crypto-asset trading platform does not use segment MICs, the operating MIC shall be used.	{MIC} – crypto-asset trading platform
12	Publication date and time	Date and time when the transaction was published by a crypto asset trading platform.	{DATE_TIME_FORMAT}
13	Venue of Publication	Code used to identify the crypto-asset trading platform publishing the transaction.	{MIC} – crypto-asset trading platform
14	Transaction identification code	Alphanumeric code assigned by crypto-asset trading platforms in accordance with Article 14 of Commission Delegated Regulation (EU) 2025/416 <sup>(1)</sup> used in any subsequent reference to the specific trade.	{ALPHANUM-52}

Table 3

**List of flags for post-trade transparency**

Flag	Name	Description
'CANC'	Cancellation flag	Where a previously published transaction is cancelled.
'AMND'	Amendment flag	Where a previously published transaction is amended.

<sup>(1)</sup> Commission Delegated Regulation (EU) 2025/416 of 29 November 2024 supplementing Regulation (EU) 2023/1114 of the European Parliament and of the Council with regard to regulatory technical standards specifying the content and format of order book records for crypto-asset service providers operating a trading platform for crypto-assets (OJ L, 2025/416, 14.3.2025, ELI: [http://data.europa.eu/eli/reg\\_del/2025/416/oj](http://data.europa.eu/eli/reg_del/2025/416/oj)).